acid molecules of (a). In another embodiment, the nucleic molecule sequence above comprises a ligand-binding domain of a GFRα3 polypeptide of amino acids 85 to 360 of SEQ ID NO; 15, amino acids 84 to 329 of SEQ ID NO: 17, or the sequence of amino acids 110 to 386 of SEQ ID NO: 20, or their complementary nucleic acids. The isolated nucleic acid comprises a GFRα3 encoding sequence which preferably hybridizes under stringent conditions to nucleic aid sequences encoding a GFRα3 polypeptide of the invention. The sequence identity preferably is at least about 75%, more preferably at least 85%, even more preferably at least 90%, most preferably at least 95%. In one aspect, the encoded polypeptide has at least about 75%, preferably at least 80%, more preferably at least 85%, even more preferably at least 90%, and most preferably at least about 95% sequence identity with a polypeptide having amino acid residues 27 to 400 of SEQ ID NO: 15, amino acids 27 to 369 of SEQ ID NO: 17, amino acids 27 to 374 of SEQ ID NO; 5, a ligand-binding domain of a GFRα3 polypeptide of amino acids 84 to 360 of SEQ ID NO: 15, amino acids 84 to 329 of SEQ ID NO: 17, or the sequence of amino acids 110 to 386 of SEQ ID NO: 20. Preferably the identity is to amino acid residues 27 to 400 of SEQ ID NO; 15 and DNA encoding it. In a further embodiment, the isolated nucleic acid molecule comprises DNA encoding a GFRα3 polypeptide having amino acid residues 27 to 400 of SEQ ID NO: 15, or is complementary to such encoding nucleic acid sequence, and remains stably bound to it under at least moderate, and optionally, under high stringency conditions. In another aspect, the invention provides a nucleic acid of the full length protein of clone DNA48613 (SEQ ID NO: 14), DNA48614 (SEQ ID NO: 16) or murine GFRα3 (SEQ ID NO: 4) (clone 13). DNA48613 (SEQ ID NO: 14) and DNA 48614 (SEQ ID NO: 16) were deposited with the ATCC under accession numbers ATCC 209752 (Designation: DNA48613-1268) and ATCC209751 (Designation: DNA48614-1268), respectively, on April 07, 1998.--

Please replace the paragraph beginning at page 7, line 23, with the following rewritten paragraph:

--Figures 1A-B shows the nucleotide sequence (SEQ ID NO: 4) and deduced amino acid sequence (SEQ ID NO: 5) of a native sequence of murine GFRα3.--

Please replace the paragraph beginning at page 7, line 30, with the following rewritten paragraph:

--Figure 3 shows the alignment comparison between murine (SEQ ID NO: 5) and human (SEQ ID NO: 15) GFRα3 amino acid sequences. Conserved residues are boxed.--

Please replace the paragraph beginning at page 7, line 32, with the following rewritten paragraph:

--Figure 4 shows the alignment comparison between human GFRα3 (SEQ ID NO: 15) (from DNA48613) and its splice variant (SEQ ID NO: 17) (from DNA48614). Conserved sequences are boxed. The 30 amino acid deletion sequence is indicated.--

Please replace the paragraph beginning at page 19, line 16, with the following rewritten paragraph:

--The variants can be those encoded by an isolated nucleic acid molecule having at least about 65% sequence identity to (a) a nucleic acid sequence encoding a GFRα3 polypeptide comprising the sequence of amino acids 27 to 400 of SEQ ID NO: 15, amino acids 27 to 369 of SEQ ID NO: 17 or amino acids 27 to 374 of SEQ ID NO: 5 or (b) the complement of the nucleic acid molecules of (a). Further, the variants can be encoded by nucleic molecule sequences comprising a ligand-binding domain of a GFRα3 polypeptide of amino acids 84 to 360 of SEQ ID NO: 15, amino acids 84 to 329 of SEQ ID NO: 17, or the sequence of amino acids 110 to 386 of SEQ ID NO: 20, or their complementary nucleic acids. These isolated nucleic acid molecules preferably comprise a GFRα3 encoding sequence which preferably hydridizes under stringent conditions to nucleic acid sequences encoding a GFRα3 polypeptide of the invention. The sequence identity preferably is 75%, more preferably at least 85%, even more preferably at least 90%, most preferably at least 95%. Typically, the polypeptide has at least about 75%, preferably at least 80%, more preferably at least 85%, even more preferably at least 90%, and most preferably at least about 95% sequence identity with a polypeptide having amino acid residues 27 to 400 of SEQ ID NO: 15, amino acids 27 to 369 of SEQ ID NO: 17, amino acids 27 to 374 of SEQ ID NO: 5, a ligand-binding domain of a GFRα3 polypeptide of amino acids 84 to 360 of SEQ ID NO: 15, amino acids 84 to 329 of SEQ ID NO: 17, or the sequence of amino acids 110 to 386 of SEQ ID NO: 20. Preferably the identity is to amino acid residues 27 to 400 of SEQ ID NO: 15 and DNA encoding it. The isolated nucleic acid molecule can contain a DNA encoding a GFRα3 polypeptide having amino acid residues 27 to 400 of SEQ ID NO: 15, or is

complementary to such encoding nucleic acid sequence, and remains stably bound to it under at least moderate, and optionally, under high stringency conditions. The protein can be encoded by the nucleic acid encoding the full length protein of clone DNA48613 (SEQ ID NO: 14), DNA48614 (SEQ ID NO: 16) or murine GFRα3 (SEQ ID NO: 4) (clone 13), or one that hybridizes thereto under stringent conditions. DNA48613 (SEQ ID NO: 14) and DNA48614 (SEQ ID NO: 16) were deposited with the ATCC under accession numbers ATCC 209752 (Designation: DNA48613-1268) and ATCC 209751 (Designation: DNA48614-1268), respectively, on April 07, 1998.--

Please replace the paragraph beginning at page 49, line 9, with the following amended paragraph:

--The deduced amino acid sequence (SEQ ID NO: 17) of DNA48614 and comparison to SEQ ID NO: 15, revealed it to be an alternatively spliced form of DNA48613, with a 30 amino acid deletion (amino acid positions 127-157, counting from the initiation methionine), as shown in Figure 4. Interestingly, none of the cysteines are deleted in this clone. Clones DNA48613 and DNA48614 have been deposited with ATCC and are assigned ATCC deposit nos. 209752 (Designation: DNA48613-1268) and 209751 (Designation: DNA48614-1268), respectively.--

Please replace paragraph beginning at page 58, line 36, with the following rewritten paragraph:

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Material	ATCC Dep. No.	Deposit Date
DNA48613	209752	April 07, 1998
DNA48614	209751	April 07, 1998--

Remarks

The specification has been amended to include the use of the assigned sequence identifiers in all instances where the description discusses such sequences. Further, as the DNA for murine GFRα3 (clone 13) has not been deposited at the ATCC, all instances referring to such deposit, at page 3, line 38, at page 19, line 27, at page 49, line 14, and at page 58, line 37, have been removed accordingly. The amendments to the specification are of formal nature, and do not add new matter.